



Channel Islands National Marine Sanctuary Sanctuary Superintendent's Report



Volume 6, Number 2

A report for the Sanctuary Advisory Council and Sanctuary Constituents

May 2008

ABOUT THE SANCTUARY

Designated in 1980, the Channel Islands National Marine Sanctuary (CINMS or sanctuary) consists of an area off the coast of California of over 1,100 square nautical miles adjacent to the following islands and offshore rocks: San Miguel Island, Santa Cruz Island, Santa Rosa Island, Anacapa Island, Santa Barbara Island, Richardson Rock, and Castle Rock, extending seaward to a distance of six nautical miles. The islands vary in distance from 12 to 40 nautical miles offshore from Santa Barbara and Ventura counties in southern California.

A fertile combination of warm and cool currents in this area results in a great variety of plants and animals including kelp forests, fish and invertebrates, pinnipeds, cetaceans and sea birds. The sanctuary also has a wealth of maritime heritage resources including Chumash Native American artifacts and over 100 historic shipwrecks. Human uses in the area include commercial and recreational fishing, marine wildlife viewing, boating, diving, kayaking, maritime shipping, nearby offshore oil and gas development, research and monitoring, and numerous educational activities.

MANAGEMENT PLAN REVIEW

Proposed Regulatory Action on Large Vessel Discharges

The National Oceanic and Atmospheric Administration (NOAA) is seeking public input on a Channel Islands National Marine Sanctuary (CINMS or sanctuary) proposal to regulate sewage and graywater discharges from large vessels (300 gross registered tons or more), including cruise ships and container ships, in sanctuary waters. The proposed regulations are explained in a supplemental draft environmental impact statement (SDEIS) and proposed rule that NOAA released on March 29. The new proposal is the result of a similar public process NOAA conducted in 2006 as part of the sanctuary's management plan review. During that process, NOAA received substantial public and agency comments requesting more stringent sanctuary regulation of sewage and graywater discharges from large vessels, and consistency with the California Clean Coast Act. The sanctuary's northeastern edge is overlapped by shipping lanes that are transited by nearly 7,000 large vessels per year, and NOAA is concerned about the high volumes of sewage and graywater that could be discharged. The new proposal would help maintain sanctuary water quality and protect sanctuary resources, while continuing to allow large vessels to travel through sanctuary waters. *(Continued on next page.)*

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Window on the Sanctuary

The NOAA Twin Otter aircraft is currently supporting NOAA mapping and monitoring projects in southern California.
Photo: Kip Evans, Mountain & Sea Productions



Because the vast majority of large vessels in the sanctuary are only there to use the shipping lanes, the proposed regulations would require them to hold sewage and graywater on board for less than 20 nautical miles when traveling in the northwest-bound lane, and for less than 40 nautical miles when traveling in the southeast-bound lane. Most large vessels can cover these distances in approximately one to two-and-a-half hours. The public comment period will run through May 30. Additional information and links to the documents are available on the "Management Plan" section of the sanctuary's web site (<http://channelislands.noaa.gov>).

Final Management Plan Development

Progress continues to advance on developing the Final Management Plan and Final Environmental Impact Statement (FMP/FEIS). Comments on the Draft Management Plan, Draft Environmental Impact Statement, SDEIS and proposed rule are being considered and integrated into the FMP, FEIS, and a Final Rule. Sanctuary staff will continue to provide updates on the SDEIS and associated proposed rule, FMP, FEIS, and Final Rule at upcoming sanctuary advisory council meetings and via the "Management Plan" section of the sanctuary's web site (<http://channelislands.noaa.gov>).

RESOURCE PROTECTION

CINMS Conducts Outreach with Los Angeles/Long Beach Harbor Safety Committee

On April 2, Sean Hastings (Sanctuary Resource Protection Coordinator), and Steve Katz (Sanctuary Research Coordinator) spoke with members of the Los Angeles/Long Beach Harbor Safety Committee. Hastings and Katz announced and fielded questions about the recent CINMS release of the SDEIS and proposed rule regarding regulation of sewage and graywater discharges from large vessels (300 gross registered tons or more), including cruise ships and container ships, in sanctuary waters. They also discussed the collaborative work taking place to address the threat of ship strikes to blue whales within the Santa Barbara Channel, highlighting the important cooperation between the shipping industry, NOAA and the U.S. Coast Guard (USCG). (See next two articles).

Seasonal Return of Blue Whales to the Sanctuary

On May 1, Island Packers, a passenger vessel ferry service regularly plying Sanctuary waters, noted the first blue whale sighting of 2008. This marks the seasonal return of this endangered species to waters of the Santa Barbara Channel and sanctuary. Captain Anthony Lombardi of Island Packers reported this first sighting of an approximately 70 foot long, adult blue whale, and noted that the friendly whale gave passengers a treat by spending significant time swimming around the boat. Later the same vessel reported seeing a blue whale calf in water 100 feet deep within the sanctuary near Prisoner's Harbor on Santa Cruz Island. Blue whales are the largest creatures ever to exist on earth, surpassing even the dinosaurs, reaching a maximum length of 110 feet and weighing up to 200 tons. This species is easily identified by its blow, an impressive tall column of spray up to 27 feet high. Blue whales are an annual visitor to the sanctuary. Their arrival this year is particularly keenly anticipated given the anomalously high mortality observed in 2007, including one suspected and two confirmed ship strikes. A 2007 NOAA Fisheries stock assessment reported an overall rate of decline in estimated population abundance between 1992 and 2005.

Sanctuary Advances Effort to Reduce Ship Strike Risk for Blue Whales in the Santa Barbara Channel

In early May, sanctuary staff advanced efforts to protect blue whales in the Santa Barbara Channel by forwarding a draft emergency response plan to members of a special subcommittee of the sanctuary advisory council. (The blue whale subcommittee was formed by the SAC in November, 2007 to address both short- and long-term blue whale threat reduction strategies.) The draft plan aims to align and coordinate the resources and efforts of NOAA Fisheries' Southwest Regional Office and the NOAA Office of Protected Resources with that of the sanctuary and USCG. Together, with support from the Marine Exchange of Southern California and involvement by the Santa Barbara Museum of Natural History, the responsible agencies will strive for heightened surveillance of whales and ships within the Santa Barbara Channel, seek to enhance and improve coordinated response to possible strandings, and look to initiate precautionary management actions should high risk conditions appear this summer. These efforts follow the unfortunate and unprecedented mortality in 2007 of



five blue whales which occurred within a two month period in or near the sanctuary. This includes, as noted above, one suspected and two confirmed ship strikes. Subcommittee members will review, revise and continue to develop the draft emergency response plan in anticipation of presenting it for possible endorsement by the sanctuary advisory council at its public meeting in May or July, 2008. However, the key agencies are already working together to mitigate risk to blue whales as we enter the 2008 blue whale season, thanks in large part to the efforts of the sanctuary advisory council to heighten awareness of this issue.

SANCTUARY ADVISORY COUNCIL

Sanctuary Advisory Council Welcomes New and Reappointed Members

Appointments have been recently finalized for seven positions on the sanctuary advisory council (advisory council). CINMS congratulates and looks forward to working with the following individuals as they begin two-year terms on May 30, 2008:

- Maria Petueli, Education Member (new member)
- Jose Chicote, Education Alternate (new member)
- Amy Spandrio, Public At-Large Alternate (new member)
- Dan Powell, Public At-Large Alternate (formerly Education Alternate)
- Andrea Moe, Tourism Alternate (reappointed)
- Capt. David Bacon, Recreational Fishing Member (reappointed)
- Merit McCrea, Recreational Fishing Alternate (reappointed)

Still pending are appointments for the Chumash Community member and alternate positions, with finalization expected in June.

Chumash Community Working Group Holds Recruitment Meeting in Santa Ynez

On March 29, the advisory council's Chumash Community Working Group convened a recruitment meeting to introduce members of the Chumash community to the advisory council, and to discuss endorsements for the next Chumash Community member and alternate on the advisory council. The

Santa Ynez Band of Chumash Indians Council of Elders hosted the meeting in Solvang, California. Chumash representatives from both the Santa Ynez and Coastal bands (Santa Barbara, Ventura, and Malibu) attended the meeting. Chris Mobley (Sanctuary Superintendent), Michael Murray (Sanctuary Deputy Superintendent), and outgoing advisory council Chumash Community seat member Paulette Cabugos gave a sanctuary overview and described the value of and the opportunities for a new advisory council Chumash Community member and alternate. Mobley presented commemorative plaques to Cabugos and outgoing advisory council Chumash Community seat alternate Reggie Pagaling in gratitude for their service on the advisory council. Linda Krop (Advisory Council Vice-Chair), provided her perspective on the value of participating in the advisory council. The working group reached agreement on the individuals they would like to endorse and subsequent to the meeting sent their recommendation letter to Chris Mobley. Appointment of new Chumash Community representatives is still pending, but is expected in June.

Please join the sanctuary in thanking Paulette Cabugos and Reggie Pagaling for their tenure on the advisory council, and in welcoming new Chumash Community representatives once they are announced.

Weather Buoy Subcommittee Formed

The advisory council took action at its latest meeting (on March 14), to form a subcommittee to address the impending loss of two weather buoys from the Santa Barbara Channel. The advisory council received an update from Eric Boldt (Warning Coordination Meteorologist, National Weather Service Los Angeles/Oxnard), regarding the likely loss of two of the weather buoys in the Channel. The advisory council is concerned about safety issues for mariners if the buoys are removed. Mariners frequently rely on data from the buoys for safe voyage in the Channel, which is subject to high winds, swell, and rapidly changing conditions. These buoys also improve local weather forecasting and physical oceanographic modeling of the sanctuary region. The subcommittee is drafting a letter of support, to be presented at the May 30 advisory council meeting, requesting that funding be allocated to maintain and repair the buoys.

The advisory council successfully addressed this issue in 2005 when three buoys were in danger of



decommissioning. At that time, the advisory council wrote a letter to Vice Admiral Conrad C. Lautenbacher, Jr., U.S. Navy (Ret.), the Under Secretary of Commerce for Oceans and Atmosphere. In response, Dr. Paul Moersdorf (Director of NOAA's National Data Buoy Center), addressed the advisory council and assured them that funds could be reprogrammed to keep the buoys operational in the short-term. The \$160,000 in short-term funds provided by NOAA's National Ocean Service have now run out. The two buoys were established for and have been sponsored by the Minerals Management Service (MMS) since 1982 and 1993, respectively. These buoys helped MMS understand ocean currents in the area. The MMS agreement expired in December 2005.

Advisory Council to Discuss Ocean Acidification

At its May 30 meeting, the advisory council will delve into the topic of ocean acidification, a priority concern for this group. The advisory council will hear from two renowned experts in the field: Dr. Victoria Fabry (Professor of Biological Oceanography, California State University San Marcos) and Dr. Gretchen Hoffman (Associate Professor, Ecology, Evolution and Marine Biology, University of California Santa Barbara). The advisory council's Conservation Working Group is developing a comprehensive report on ocean acidification, and plans to present a draft version at the meeting. For more information on this upcoming meeting please visit:

<http://www.channelislands.noaa.gov/sac/announcement.html>.

VESSEL & AIRCRAFT OPERATIONS

Vessel Program Support

During the reporting period (February 23 – May 2), the sanctuary research vessel (R/V) *Shearwater* completed the following operations:

Research and Monitoring

- Channel Islands National Park (CINP or park) intertidal monitoring on Anacapa Island, and U.S. Geological Survey (USGS) seabird monitoring on Prince Island, March 3-7

- University of California Santa Barbara (UCSB) multi-beam sonar survey of oil seeps near Coal Oil Point, March 13-15
- UCSB Plumes and Blooms conductivity, temperature, and depth (CTD) survey of Santa Barbara Channel (ongoing), March 18
- Clean Seas, USCG, Marine Safety and Response Corporation, CINP representatives taken on a survey of sensitive sites near Santa Cruz and Santa Rosa islands to assist in updating the regional oil spill response plan, March 19
- Landed CINP staff and Santa Barbara City College students on Santa Barbara Island to conduct seabird habitat restoration, March 21, 24
- Conducted marine mammal surveys in Santa Barbara Channel to test out new CINMS surveying protocols, March 25-26
- USCB fish larvae survey using plankton nets and CTD cast near Santa Cruz Island, April 1-2
- Scripps Institute researchers unsuccessful recovery attempt of marine mammal monitoring instruments in Santa Barbara Channel, April 3
- USGS seabird monitoring on Prince Island, Scorpion Anchorage, April 14
- Scripps Institute of Oceanography researchers recovered and deployed marine mammal monitoring instruments in Santa Barbara Channel, conducted acoustic surveys, April 16-18
- UCSB Plumes and Blooms, CTD survey of Santa Barbara Channel (on going), April 22
- NOAA National Marine Fisheries Service (NMFS) conducted dives on Santa Catalina Islands in search of remaining white abalone habitat, April 23-24
- CINP kelp forest monitoring project, Santa Barbara Island, April 28-May 2

High Definition Film Project

- CINMS and film staff dived near San Miguel and Anacapa islands collecting footage of seals and sea lions along with a host of other marine life, March 10-11
- Collected film footage near Santa Barbara Island, April 7-9

Outreach

- Camarillo High School students taken to the Santa Barbara Channel to conduct various science experiments such as plankton tows and CTD sampling, March 20



- Channel Islands Naturalist Corps taken to Anacapa Island

Training

- CINMS dive accident training day, April 21

For details on any of the projects listed above, please refer to the relevant section in this Superintendent's Report.

On-the-Water Emergency Training Activities

On April 21, ten CINMS staff participated in a variety of safety drills aboard the R/V *Shearwater*. Steve Katz, (Sanctuary Unit Dive Supervisor and Research Coordinator), worked with seven other staff divers in two simulated diving accidents and medical emergencies. *Shearwater* crew members Captain Terrence Shinn and First Mate Charles Lara guided the staff through man-overboard, abandoned-vessel, and fire drills while the ship was underway. Over 200 days a year, CINMS crew, divers, and staff on *Shearwater* participate in a variety of research and education missions at the Channel Islands, which can experience varied and rapidly changing sea conditions. Safety is a top priority for the sanctuary, and continuous training is necessary to maintain proficiency.



Steve Katz (Sanctuary Research Coordinator and Unit Dive Supervisor) explains proper emergency response to divers and crew, including Terrance Shinn (Sanctuary Vessel Captain) and Julie Bursek (Sanctuary Education Coordinator). Photo: Laura Francis.

NOAA Twin Otter Aircraft Arrives on West Coast, Supports SAMSAP

NOAA-56, a NOAA Twin Otter aircraft, is now on the west coast supporting NOAA coastal mapping and monitoring projects (see photo p. 1). Through a partnership with NOAA's Remote Sensing Division, and Aircraft Operations Center (AOC), the West Coast Region (WCR) of the Office of National Marine Sanctuaries (ONMS) will have access to the aircraft through May, 2008. The main objective of this effort is to demonstrate the requirements for NOAA to regionally base an aircraft on the west coast and introduce the capabilities of the Twin Otter as a platform for a variety of management and research projects. The Twin Otter will undertake a variety of cross-NOAA multi-mission projects supporting the ONMS, Remote Sensing Division, Aircraft Operations Center, NOAA Office for Law Enforcement, and NOAA Fisheries. The aircraft will support a variety of projects in southern California, including the Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP), which is designed to collect information on human use patterns around the Channel Islands, and joint enforcement exercises with the USCG. The aircraft provides an opportunity to build broad support for a west coast regional aircraft.

RESEARCH & MONITORING

Research and Monitoring Activities

Channel Islands White Abalone Recovery Research

From February 20-21, sanctuary staff facilitated and participated in a research cruise with NOAA's Southwest Fisheries Science Center White Abalone Recovery Team onboard the R/V *Shearwater*. Scientists visited Farnsworth Bank at Santa Catalina Island, one of the last known locations of white abalone. They were searching for living abalone specimens to contribute to recovery brood stock, and were evaluating habitat at the site for possible future outplanting. The scientists found no live white abalone, but they did see empty shells, indicating previous residents. They also observed small numbers of pink and green live abalone, and assessed abalone habitat quality. From April 16-17, the research team returned to Santa Catalina Island for more surveys.

White abalone were the first marine invertebrate to be placed on the federal endangered species list. On

January 11, 2008, NOAA Fisheries proposed listing the black abalone as endangered (Federal Register, 73(8):1986-1999). Once abundant at the Channel Islands, all species of abalone, except red abalone at San Miguel Island, are now uncommon there as a result of disease and overfishing. Research and recovery efforts continue, including aquaculture of specimens that in the future could potentially be released into the wild to reestablish populations.

26 Years of Intertidal Research & Monitoring

Park Biologists were onboard R/V *Shearwater* March 3-7, sampling the rocky intertidal communities of Santa Cruz and Anacapa islands. Assisted by *Shearwater* crew and other sanctuary staff, Dan Richards (Park Marine Biologist) sampled five sites at the islands. The park has conducted this monitoring program continuously since 1982, with sampling every spring and fall to establish baseline data and monitor changes over time. The monitoring includes photographs and counts of motile invertebrates in permanent quadrats and counts and measurements of macroinvertebrates. This effort supports continuous data collection in sensitive marine habitat, including information on black abalone, a species recently proposed for inclusion on the federal endangered species list.

2008 Cassin's Auklet Nest Monitoring Begins

Josh Adams (USGS Researcher) was on board R/V *Shearwater* March 6-7, to monitor nesting status of Cassin's Auklets in the sanctuary and park. Adams and his assistants visited Scorpion Rock at Santa Cruz Island, and found nest occupancy and three failed nesting attempts. The researchers also set up plots for native vegetation restoration to benefit the burrowing seabirds. Adams then visited Prince Island off the coast of San Miguel Island, and found 100% nest occupancy but no eggs laid yet. The nest occupancy at both islands showed hopeful signs for a successful breeding season. A later trip on April 14 showed a minimum of 50% occupied nests had eggs at Prince Island and 30% of occupied nests at Scorpion Rock had eggs. These eggs are expected to hatch in two to four weeks. Cassin's Auklets have experienced complete nesting failure at the Channel Islands for the past two years. The Cassin's Auklet is an ecosystem indicator species because of its high trophic level (its diet consists of zooplankton, along with larval fish and squid). Recent nesting failure of this species may indicate changes in oceanographic conditions that may affect other species such as whales.

Sanctuary Tests Marine Mammal and Seabird Survey Methods

On March 25 and 26, sanctuary staff conducted pilot tests of at-sea marine mammal and seabird surveys, using the R/V *Shearwater* as a research platform. They completed five, 20 km transects on the north side of Santa Cruz Island. Staff tested hardware, software, equipment, and survey protocols. The surveys will provide information on distribution, density, and abundance of animals in the sanctuary, including protected species, and will assist with management of whale/ship interactions. More surveys are planned throughout the year, and are dependent on funding.

Students Assist with Habitat Restoration on Santa Barbara Island

Students from Santa Barbara City College's Ecological Restoration class visited Santa Barbara Island March 21-24, to assist with ongoing habitat restoration. The R/V *Shearwater* transported twenty-two students and volunteers to the island for the habitat restoration project. Plant habitat restoration involves removing non-native vegetation and establishing plots of native vegetation. Restoration efforts are expected to benefit species such as Xantus's Murrelets, Ashy Storm-Petrels, and Brown Pelicans, which have significant portions of their breeding populations at the Channel Islands.

The purpose of this collaborative project is to enhance and restore seabird nesting habitat at the Channel Islands. The project is led by the park, funded by the Montrose Settlements Restoration Program, and includes the sanctuary and Santa Barbara City College as partners.

2008 SAMSAP Aerial Monitoring Season Underway With Participation from Congressional Staff and Media

Sanctuary staff conducted the first 2008 Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP) survey flights over the four northern Channel Islands on April 10, and April 12. The April 10th flight was an experimental night time flight to test feasibility of night vision goggles for aerial enforcement. The ability to recognize vessels was variable depending on vessel type and light quality. The April 12th flight captured boater use of the islands during the first warm weather weekend of 2008. Researchers observed high recreational vessel traffic at Anacapa and Santa Cruz islands, and the east end of Santa Rosa Island. They also



observed three humpback whales at the extreme west end of the sanctuary, and two on the south side of Santa Rosa Island.

On April 15, CINMS staff conducted an aerial survey of the sanctuary with staffer Greg Haas from the office of Representative Lois Capps, Co-Chair of the House National Marine Sanctuary Caucus. During the flight, NOAA staff demonstrated SAMSAP survey methods, observing vessels and a very active humpback whale. Sanctuary staff described how they utilize SAMSAP data for a variety of management purposes. Staff also demonstrated a coastal mapping digital camera system from NOAA's Remote Sensing Division, and discussed potential uses of the camera for sanctuary purposes. A summary of the flight has been posted on the NOAA Legislative Affairs website at <http://www.legislative.noaa.gov/>.

On April 19, Pulitzer prize-winning Los Angeles Times reporter Ken Weiss participated in a sanctuary survey flight, and sanctuary staff provided him with an overview of historical trends and changes seen in the SAMSAP data. Staff also briefed Weiss on the sanctuary's blue whale ship strike issue, and the critical role aircraft operations play in monitoring shipping lanes in the Santa Barbara Channel.

NOAA-56, NOAA's Twin Otter aircraft currently stationed on the west coast, served as the platform for the April survey flights. SAMSAP is designed to monitor the location and activities of boats and marine mammals to inform sanctuary management.

Acoustic listening devices deployed at Channel Islands
From April 16-18, Scripps Institute of Oceanography researchers retrieved and deployed devices designed to record sounds from ships and whales in the sanctuary. Working from the R/V *Shearwater*, the researchers from Dr. John Hildebrand's lab recovered a high-frequency acoustic recording package (HARP) at the western end of the Santa Barbara Channel, and also deployed a new HARP at this location. The equipment provides valuable information about the cargo vessel traffic that transits through the Santa Barbara Channel and the eastern portion of the sanctuary. Information on ships and whales has become a high priority issue due to several Santa Barbara Channel blue whale ship strike mortalities in 2007.

Citizen Science

For general information about the Channel Islands Naturalist Corps (CINC) volunteers who conduct citizen science, please see p. 13.

State of California Harmful Algal Bloom Study

CINC volunteers continue to conduct plankton tows on board the R/V *Shearwater* as part of a statewide study on harmful algal blooms. The tows are done in cooperation with Plumes and Blooms research cruises scheduled throughout the year.

Anacapa Island Larval Settlement Study

Several CINC volunteers continue to assist with a benthic larval settlement study in conjunction with the park and UCSB. They collect samples two times per month at Anacapa Island.



Kathleen Roos, CINC volunteer, collects a plankton sample on board the R/V *Shearwater* on a March 18 Plumes and Blooms research cruise. Photo courtesy Kathleen Roos.

Marine Mammal Sightings Reports

CINC volunteers continue to enter marine mammal sightings data from the Santa Barbara Channel into the sanctuary's Marine Mammal Sightings Database <http://www.cisanctuary.org/mammals/>. Over 9,000 reports have been entered over the past six years, representing over 18 species of marine mammals and thousands of individual animals. This data will be integrated into the Sanctuary Integrated Monitoring Network (SIMoN), which enables researchers to monitor the sanctuary effectively by integrating the existing monitoring programs and identifying gaps in

You can watch the monthly From Shore to Sea Lectures on Public Access Television!

NEW!!

Channel 15 in Ventura: <http://www.capstv.org>

Channel 21 in Santa Barbara:

http://www.sbchannels.tv/khxc/index.php?app=ccp0&ns=display&ref=21_schedule

information. SIMoN serves to make the monitoring data available to managers, decision makers, the research community, and the general public.

Research Outreach

SAMSAP Presented at California GIS Conference

Natalie Senyk (Sanctuary Physical Scientist) attended the annual California Geographic Information Systems (CalGIS) Conference held in Modesto, California on April 23-25. The annual conference, which showcases and promotes GIS within California, featured over 100 presentations on a variety of GIS-related topics. Senyk provided a presentation highlighting SAMSAP, a program through which sanctuary staff have been collecting data on vessel distributions for ten years. Data show that distinct changes in human use patterns have occurred over the last decade, with certain areas becoming hot spots for activities such as recreational fishing and kayaking.

EDUCATION, VOLUNTEER, & OUTREACH

Special Events

2008 From Shore To Sea Lecture Series

On February 12 and 13, Gary Davis (retired National Park Service Chief Scientist for Ocean Programs), and Dr. Satie Airamé (USCB Marine Biologist), lectured on the Channel Islands Marine Protected Areas (MPAs). The talk, entitled "State of the Seas at the California Channel Islands," included the history and establishment of a network of marine reserves and conservation areas, and a five-year review of these areas with information on species that are targeted by fishing, and how scientists have observed higher densities and bigger fish in marine reserves than in the surrounding waters. Dr. Airamé also discussed changes in some California fisheries and how further research and more time are needed to fully assess the value of MPAs.

On March 11 and 12, Dr. John Hildebrand (a professor at the University of California San Diego, Scripps Institute of Oceanography), spoke about marine mammal acoustics monitoring in the Channel Islands. Dr. Hildebrand described how his research team uses passive acoustic monitoring to study marine mammals and shipping noise in the Channels Islands region. He described broadband acoustic data and shipping vessel data collected from an Automatic Information System (AIS), the tracking system required on all vessels greater than 300 tons.

The sanctuary, park, and Santa Barbara Maritime Museum jointly sponsor the "From Shore to Sea" lecture series in an effort to further the understanding of science and history of the Channel Islands and surrounding waters. The programs are free and open to the public. The lectures take place at 7:00 p.m. on one Tuesday and Wednesday per month, with Tuesday lectures at the Santa Barbara Maritime Museum's Munger Theatre, and Wednesday lectures at the Channel Islands National Park Robert J. Lagomarsino Visitor Center. For upcoming lectures please refer to the sanctuary calendar on p. 23, or visit the sanctuary's From Shore to Sea web page: channelislands.noaa.gov/edu/shoretosea.html.

Conferences

Bay-Watershed Education and Training (B-WET)

On May 16 and 17, Laura Francis (Sanctuary Education Coordinator) represented the sanctuary at the first annual B-WET Conference in Monterey, California. Francis presented information on the sanctuary's efforts to educate the public and resource users about marine reserves, and some of the summary data from the first five years of marine reserves monitoring with an eye toward how it can be used in educational products and programs.

Workshops and Trainings

Investigating Coastal Watersheds Teacher Workshop

On March 2, Laura Francis helped to coordinate and participated in an Investigating Coastal Watersheds Geographic Information Systems teacher workshop in Camarillo, California. The Ventura County Office of Education hosted and taught the workshop. Twelve teachers from the Teacher Enrichment Adventure in Watershed Education (TEAWET) program participated in the training and learned how to use My World Software to investigate storm water pollution, and to analyze environmental monitoring data. The TEAWET program is a B-WET-funded professional development project for teachers, which focuses on watershed issues in Santa Barbara and Ventura counties.

Teacher Enrichment Adventure in Watershed Education and Training (TEAWET) Workshop

On March 8, Laura Francis presented curriculum materials and an overview of the sanctuary to twelve teachers from the TEAWET program at a workshop hosted by the Santa Barbara Museum of Natural History. On May 10, Laura Francis and Dr. Dave Siegel (UCSB) presented the Plumes and Blooms research project. They sought a teacher to work with them and with the Ty Warner Sea Center to update the online Plumes and Blooms lessons with new data sets, and to connect the lessons to ocean literacy and California Environmental Education Principles and Concepts.

Telepresence Education Workshop

From April 7-8, Julie Bursek (Sanctuary Education Coordinator) represented the sanctuary at a telepresence workshop in Mystic, Connecticut. Representatives from Immersion Presents, University of Rhode Island, Boys and Girls Club, Smithfield School District, Monterey Bay and Thunder Bay national marine sanctuaries, the NOAA Office of National Marine Sanctuaries, and NOAA Office of Exploration also participated in the workshop. The workshop's purpose was to understand what each organization is doing in terms of telepresence, and to look at future telepresence programming and partnership opportunities with the NOAA Office of Exploration, the NOAA vessel *Okeanos*, and the National Marine Sanctuary System. CINMS is interested in providing live telepresence programming from the R/V *Shearwater*.

Long Term Monitoring Program and Experiential Training for Students (LiMPETS) Teacher Trainings
Julie Bursek provided a LiMPETS rocky intertidal and sand beach field training on April 11, at County Line Beach in Malibu, California, for three teachers from Roosevelt High School (Los Angeles Unified School District). These teachers will be coordinating ongoing LiMPETS monitoring with their students as part of a comprehensive science program they received funding for through a NOAA grant. Bursek provided an overview of the LiMPETS protocols used to assess species abundance and distribution of macroinvertebrates and macrophytes (plants), and then worked with the teachers to collect data for random quadrat surveys and total organism counts. A second LiMPETS workshop is being planned for June 8, in partnership with the Centers for Ocean Science Education Excellence (COSEE) -West and Cabrillo Marine Aquarium. This workshop will target teachers and informal educators in the Los Angeles Unified School District. For more information about these workshops and LiMPETS visit <http://limpetsmonitoring.org>.

Educational Products and Facilities



John Brooks filming the Aquarium of the Pacific's kelp forest exhibit. Photo: Laura Francis.

Channel Islands High Definition Film Update

During the last week of February, NOAA's Ocean Media Center captured underwater footage and a topside interview of a commercial urchin diver for the sanctuary's high definition documentary film. During

the first week of March, sanctuary education staff coordinated an additional film shoot in the intertidal zone at Anacapa Island. Two Oxnard-based Channel Islands Argonauts from the Multicultural Education for Resource Issues Threatening Oceans (MERITO) program and one Chumash student from San Pedro, were featured in the shoot. In April, the film crew traveled to the Monterey Bay Aquarium to shoot in the aquarium's kelp forest and outer bay tanks to capture footage of leopard sharks, sea otters, ocean sunfish, and tuna. On April 16, sanctuary staff and kids went out on the *Double Dolphin* catamaran to help with a shoot of kids watching gray whales.



Children on a *Double Dolphin* whale watching trip were recently filmed for the sanctuary's high-definition documentary.
Photo: Laura Francis.

Camera work for the film is expected to be complete by the end of June, with post-production scheduled for the summer and final completion of the film in late fall 2008.

Boating Instruction and Safety Center

On April 9, the California Coastal Commission approved the proposed location of a Boating Instruction and Safety Center in Channel Islands Harbor. Ventura County is one of the fastest growing counties in California, with over 144,000 K-12 students and 31,050 community college students. Boating and marine science programming for young people in Ventura County is currently lacking, in spite of the fact that it is home to three harbors and over 22,000 registered boaters. The new Boating Instruction and Safety Center will serve a significant portion of these audiences. The California

Department of Boating and Waterways provided major funding for this project. The sanctuary applied for and received \$112,500 in federal funds to support exhibit design and purchase of Magic Planet® exhibits. These exhibits will promote responsible visitor use of the sanctuary by providing information about ocean etiquette techniques, safety, and awareness of the CINMS regulations and MPA network. Exhibit themes include highlighting the incredible biodiversity of the Channel Islands and Santa Barbara Channel, and using shipwrecks to bring attention to the navigational hazards that exist around the Channel Islands. The boating and marine science courses taught at the Boating Instruction and Safety Center will incorporate these exhibit themes into the curriculum. This is a unique, one-time opportunity for the sanctuary to develop a significant presence in a new facility centered on boater education for youth and lifelong learners. Julie Bursek will be working with the County of Ventura Harbor Department to hire an exhibit designer to conduct focus group workshops on exhibits for the new center. For more information on Magic Planet® exhibits visit: <http://www.globalimagination.com/products.html>.

Meetings

CINMS Staff Present MPA Education and Outreach to Monterey Bay National Marine Sanctuary Education Panel (SEP)

On May 19, Julie Bursek presented an overview of the Channel Islands MPA education and outreach initiatives to members of the Monterey Bay National Marine Sanctuary SEP. The presentation included information about the needs assessment conducted by the CINMS advisory council's Sanctuary Education Team, and the different approaches taken to create education and outreach for different audiences affected by the Channel Islands MPA network. The presentation also included information on "lessons learned" and the importance of collaboration among all partners to create effective education and outreach with consistent messages.

Channel Islands Argonauts

Program Overview

Twenty-five, fourth through seventh grade students were selected to become Channel Islands Argonauts earlier this year. They were chosen from a large pool of students participating in the Multicultural Education for Resource Issues Threatening Oceans (MERITO)

Academy and the Channel Islands Live! Program , These students were selected based on their submitted essays and leadership profiles. Channel Islands Argonauts is an initiative of Channel Islands Live!, which is a partnership project of the sanctuary, park, and Ventura County Office of Education, funded by a NOAA B-WET grant. The Channel Islands Argonauts are ambassadors who advocate for protection of marine resources with emphasis on the Channel Islands.

Argonauts Poster Projects Presented at Ventura County Office of Education

On February 28, the Channel Islands Argonauts from Ventura and Oxnard cities presented their poster projects to their peers and families at the new Ventura County Office of Education auditorium. Their posters addressed Channel Islands resources or environmental issues of local, national or international relevance such as Channel Islands marine reserves, by-catch, marine debris, and urban runoff.

The Honorable Lois Capps Greets the Channel Islands Argonauts at Oxnard Earth Day Festival



Congresswoman Lois Capps greets the Channel Islands Argonauts at the CINMS booth during the Oxnard Earth Day festival.
Photo: Cliff Rodriguez

On April 12, Congresswoman Lois Capps greeted and complimented the Channel Islands Argonauts for sharing with the public their passion for protecting the ocean, during the Oxnard Earth Day Festival. The students exhibited their poster projects at the joint sanctuary-park booth during the event. The illustrative poster projects and eloquent young speakers attracted many people to the booth, including Representative Capps. “This is the

type of program that the community needs and where we should invest,” expressed Capps. Capps helped make the NOAA B-WET grant program available to Santa Barbara and Ventura counties, and she was very pleased to learn that the Channel Islands Argonauts are an outcome of this effort.

Multicultural Education for Resource Issues Threatening Oceans (MERITO)

MERITO Featured at Association of Environmental and Outdoor Education Conference

On April, MERITO program staff with the Channel Islands and Monterey Bay national marine sanctuaries presented a condensed version of the MERITO development process during the Association of Environmental and Outdoor Educators’ spring conference in Malibu, California. The presentation summarized needs assessment development, program design and evaluation, noting the importance of working with partner organizations to maximize effectiveness and efficiency. An educator participating with Monterey Bay National Marine Sanctuary’s MERITO Academy after-school program described hands-on MERITO techniques to engage and educate multicultural students about marine and watershed sciences and conservation.

CINMS Participates in MERITO Summit

On May 30, Julie Bursek and Rocío Lozano-Knowlton (Sanctuary MERITO Program Coordinator), participated in a MERITO Summit in Monterey. Hosted by Bill Douros, Director of the Office of National Marine Sanctuaries West Coast Region, the purpose of the MERITO summit was to discuss the vision and strategy for MERITO as a regional initiative, identify and discuss different collaborative materials that should be developed for MERITO, and identify both short and long-term funding objectives that will ensure program sustainability. Representatives from the Monterey Bay National Marine Sanctuary MERITO program, the National Marine Sanctuary Foundation, and the Office of National Marine Sanctuaries also participated.

The MERITO Academy

The MERITO Academy program is sponsored by a NOAA B-WET grant, CINMS, and a number of agencies and organizations including the Channel Islands Marine Resource Institute, Santa Barbara City Creeks Division, City of Oxnard Water Division, The Nature Conservancy, and Ormond Pointe Restoration

Nursery. The goal of the MERITO Academy program is to provide high quality, sustainable science programming that integrates watershed and ocean science into fourth through eighth grade level public education and extended learning programs, and to result in educated and engaged youth actively contributing to ocean protection. 80% of the students reached are Hispanic, 10% Asian, and 50% English Language Learners. For more information about MERITO please contact Rocío Lozano-Knowlton at Rocio.Lozano@noaa.gov.



MERITO Academy students assist Restoration Biologist Trishia Munro monitor, weed and plant natives at Ormond Beach Pointe. Photo: Rocío Lozano-Knowlton

MERITO Academy Field Experiences

During the spring of 2008, the MERITO Academy provided a number of 'Watershed connection to oceans' field experiences to 500 students residing in Santa Barbara, Ventura and Oxnard cities, and their teachers.

On February 26 and March 10, Rocío Lozano-Knowlton, in collaboration with Santa Barbara City Creeks Division, coordinated students' efforts to restore Sycamore creek in Santa Barbara as part of the CINMS MERITO Academy program. The students tested the creek's water quality, planted native plants provided by the city, and learned the benefits that native plants provide to our creeks and ocean water quality. 30 fifth-grade, English language learners from Santa Barbara's Franklin Elementary School participated on February 26, and 60 students from Santa Barbara's Cesar Chavez Charter School participated on March 10.

On April 15, Rocío Lozano-Knowlton led 90 fourth and fifth grade students on a trip to Anacapa Island. Since October 2007, these MERITO Academy students from Cesar Chavez Charter School in Santa Barbara have been immersed in the MERITO Program curriculum's study of watershed and ocean sciences. This sanctuary field trip represents the highlight and culmination of their MERITO Program experience.

On March 11, 18 and 25, Rocío Lozano-Knowlton, Ormond Pointe Restoration Nursery staff, and The Nature Conservancy's LA and Ventura County Land Manager Rich Handley led field activities for 160 fifth and sixth grade students from Montalvo and Drifill Elementary schools of Ventura and Oxnard cities. The bus transportation, the native plants, and restoration biologist staff time were sponsored by the Wetlands Recovery Project.



5th grade students testing Ph, Dissolved Oxygen, Turbidity and Temperature of the creek at Ormond beach as part of the CINMS MERITO Academy hands-on science experiences. Photo credit: Rocío Lozano-Knowlton

On May 25th, Rocío Lozano-Knowlton, the City of Oxnard Water Division, Ormond Pointe Restoration Nursery staff and The Nature Conservancy led the last field experience of the 2007-2008 school year for MERITO Academy students. 65 students from Ventura's Montalvo elementary participated.

The Nature Conservancy Donates 500 Backpacks to MERITO Academy Students

Apart from contributing to the educational experience of students participating in the MERITO Academy, The Nature Conservancy also donated 500 high quality backpacks to all 500 MERITO Academy students who reside in Ventura County.

Students Thank MERITO Academy Partners

On April 10, all MERITO Academy partners received over 100 heart-felt thank you letters from MERITO Academy students. In their letters students expressed their gratitude for the learning experiences and sponsorship of their field experiences at Ormond Beach and wetlands. The sponsorship included a tour of the Oxnard wastewater treatment plant, instruction and materials for native plant restoration activities at the wetland habitat, instruction for bird identification, busing, backpacks, binoculars and other materials. The overall cost of the field experiences for the 500 students residing in Ventura County who participated in the MERITO Academy was over \$20,000. CINMS paid for the program manager's coordination and instruction time. The reactions of the partners to the students' letters were favorable and promising for the 2008-2009 school year.

Channel Islands Naturalist Corps (CINC) Volunteer Program

Program Overview

Channel Islands Naturalist Corps (CINC) volunteers educate local school children, residents, and tourists, monitor sanctuary and park resources, and conduct research on board local whale watch vessels departing out of Santa Barbara Harbor, Ventura Harbor, and Channel Islands Harbor. The field season runs from January – October, capturing the presence of migrating

gray whales and foraging blue and humpback whales. In addition to field interpretation and research, CINC volunteers offer slide presentations for local schools and community groups, represent the sanctuary and park at marine-related community outreach events, and distribute outreach materials to area marine-related businesses through the Adopt-A-Business Program.

The sanctuary partners with the park to administer the CINC volunteer program. During the first year of service, CINC volunteers represent the sanctuary and park on board local whale watch vessels and educational cruises. After completion of the initial training to become whale watch interpreters, additional training opportunities are available for volunteers to become certified to lead island hikes through the park.

CINC Program Expansion

This spring the sanctuary and park merged the park's overnight volunteer program with the CINC program. This added an additional 35 volunteers to the program and over 9,000 hours of service, for a total of 154 volunteers. The park volunteers joining the CINC will receive a new uniform, are attending additional training on CINMS, and will be representing the sanctuary on multi-day trips at the islands. This effort furthers the sanctuary-park partnership, and will provide consistent messages to visitors of the sanctuary and park.

March and April Excursions

Island Programs: In March, CINC island hike naturalists participated in 14 Island Packers trips to Santa Cruz Island's Scorpion Anchorage, and eight trips to Anacapa Island aboard the *Island Adventure* and *Islander*, and one trip to Anacapa Island aboard the *Vanguard*. In April, naturalists participated in six Island Packers trips to Santa Cruz Island's Scorpion Anchorage, and six to Anacapa Island aboard the *Island Adventure* and *Islander*, and five trips to Anacapa Island aboard the *Vanguard*. In total, CINC naturalists participated in forty March and April island hike trips. Many scheduled island hike trips were cancelled this season due to inclement weather.

Whale Watching Excursions:

Harbor	Santa Barbara			Ventura	Channel Islands		
Vessel	<i>Condor Express</i>	<i>Double Dolphin</i>	<i>Speedtwin</i>	<i>Island Adventure & Islander</i>	<i>Vanguard</i>	<i>Ranger 85</i>	<i>Ranger 85 or Coral Sea</i>
Business	Sea Landing	Santa Barbara Sailing Center	Captain Don's	Island Packers	Island Packers	Channel Islands Sportfishing	Channel Islands Sportfishing (Ventura County Maritime Museum)
March trips	74	53	47	41	8	24	4
April trips	31	60	49	6	4	6	3

In March and April concessionaires provided 410 whale watching excursions (251 in March, and 159 in April). Many scheduled whale watching trips were cancelled this season due to inclement weather. The number of excursions listed for each vessel in the table above only include those with CINC volunteers on board. Trips may have multiple naturalists aboard.

Island Packers and Channel Islands Sportfishing ended their whale watching season in early April. The Ventura County Maritime Museum started whale watching trips in March.

Channel Islands Marine Floating Lab: The Ventura County Maritime Museum started floating lab trips in March on board the *Coral Sea*, out of Channel Islands Harbor. They had two trips in March, and fifteen in April.

Trainings / Monthly In-Service Meetings

Monthly meetings for the CINC run from February through September on the third Tuesday of each month.

CINC Safety Training: At the March 19, CINC monthly in-service meeting several seasoned park rangers provided a safety overview for sanctuary and park volunteers. They presented scenarios dealing with kayakers, sea sick passengers, and slips and falls on trails. They also discussed basic communication and reporting skills for incidents, and prevention of accidents. CINC volunteers interact with thousands of visitors annually, and safety is a priority for visitors and volunteers.

NOAA Seabird Restoration Training: On April 15, the CINC monthly in-service training meeting included a

presentation about efforts to restore seabirds and bald eagles at the Channel Islands. The restoration efforts are aimed at mitigating the effects on these birds of historical releases of DDT into Santa Monica Bay by the Montrose Chemical Corporation. Gabrielle Dorr, (NOAA Montrose Settlements Restoration Program Outreach Coordinator), provided an overview of the bird species targeted for restoration. Target species include burrow/crevice nesting seabirds such as the Ashy Storm-Petrel, Cassin's Auklet, and Xantus's Murrelet, as well as other seabirds such as the Western Gull, Brandt's Cormorant, and Pigeon Guillemot. Eggshell thinning and/or elevated levels of DDT were documented in the eggs of each of these species in the Southern California Bight. Restoration includes human disturbance reduction efforts to protect nesting and roosting seabirds. CINC volunteers provide interpretation on the islands and will assist with informing the public about the nesting seabirds and restoration measures such as area closures.

CINC Island Hike Training: The sanctuary and park conducted an island hike training course for new and returning CINC volunteers on April 14, 17, 22, and 24. Training topics included: an overview of formal interpretive skills, Channel Islands natural resources, cultural resources, Island history, archeology, Island Chumash, and Island plants. An April 26 field trip on board the R/V *Shearwater* to Anacapa Island and Scorpion Anchorage at East Santa Cruz Island completed the first phase of the training. The second phase includes a shadow trip to the Channel Islands with a trained CINC volunteer, and an evaluation trip with CINC staff to complete the certification process.

From Shore to Sea Lecture Series

Several volunteers had the opportunity to attend the recent From Shore to Sea lectures. This lecture series allows volunteers to expand their knowledge of the resources in the Santa Barbara Channel, in addition to their regular in-season monthly meetings. Recent topics were marine mammal acoustics monitoring in the Channel Islands, and Channel Islands MPA network five-year review results.

Channel Islands Marine Floating Labs

CINC volunteers trained in March are now participating on board the Channel Islands Marine Floating Lab's (CIMFL) vessel *Coral Sea*. CINC volunteers learned how to conduct hands-on oceanographic experiments in Channel Islands Harbor for students to analyze the biological, chemical, and physical properties of the ocean. Using a station rotation process, CIMFL staff operate separate work stations. Volunteers primarily staff the physical oceanography station, taking part in hands-on learning experiences and identifying harbor marine life during the three-and-a-half hour, on-board lab program. Some trips may include a coastal gray whale watch. These trips will provide veteran volunteers in the CINC program an opportunity to enhance their knowledge, and will provide local

educators and students with the opportunity to learn more about the sanctuary and park.

Adopt-A-Business Program

CINC volunteers continue to deliver *Protecting Your Channel Islands* brochures to businesses that provide services to Channel Islands recreational users. Volunteers have distributed approximately 5,000 brochures through this program in the first quarter of 2008.

Public Outreach

Celebration of Whales Festival, Channel Islands Harbor

On March 2, CINC volunteers represented the sanctuary and park at the 12th annual Celebration of Whales Festival at Channel Islands Harbor in Oxnard, California. The event was held to educate the public about the annual gray whale migration. Due to high winds the event was poorly attended; however, CINC volunteers maintained an exhibit to educate the hearty few seeking information about local marine life. The Ventura County Star published an article about the festival that focused on the sanctuary's participation and included interviews with several of the volunteers staffing the booth.

Fred Hall Fishing Show, Long Beach

On March 8, CINC volunteers provided information about the sanctuary and Channel Islands MPAs at the NOAA booth during the Fred Hall Fishing Show at the Long Beach Convention Center. The Fred Hall Fishing Tackle, Boat and Travel show has been called the greatest fishing show on earth. Since 1946, the Hall family has been bringing the public a show that features great seminars, the latest innovations in fishing, great travel destinations, cooking demonstrations, and the largest collection of fishing boats on display anywhere in California.

Aquarium of the Pacific's Ocean Technology Day

On March 10, the sanctuary and park hosted a joint exhibit at the Long Beach Aquarium of the Pacific's Ocean Technology Day. Telepresence technology and the *Channel Islands Live!* video broadcast program were highlighted, as well as other technologies used to explore and discover national marine sanctuaries. Hundreds of aquarium visitors were in attendance, and many families and children participated in hands-on arts and crafts activities led by CINC volunteers. Read more



Shauna Bingham (Sanctuary Volunteer Outreach Coordinator) and Sally Narkevic (CINC volunteer) collect data during the Channel Islands Marine Floating Lab volunteer training trip on March 11. Photo: Kathleen Roos.

about Technology Day in this issue's *Spotlight on Volunteers* on p. 20.

Point Mugu State Park's 12th Annual Whale Festival

CINC volunteers representing sanctuary and park hosted an educational exhibit at the Point Mugu State Park's 12th Annual Whale Festival at Sycamore Cove. The annual event highlights the migration of the Pacific gray whale, and promotes community awareness about ocean conservation issues. Over 8,000 people were estimated in attendance at the festival.

Sanctuary Staff Participate in U.S. Navy "Leaders to Sea" Program

Shauna Bingham (Sanctuary Volunteer Outreach Coordinator) was selected to participate in the Navy's "Leaders to Sea" (LTS) training program at the Naval Amphibious Base at Coronado Island in San Diego, California on April 11. The LTS program provides a unique opportunity to promote citizen awareness and understanding of the Navy's role, mission, and training procedures. The LTS program focused on the Navy's environmental stewardship efforts, and in particular marine mammal protection efforts during Navy operations. Information from this training session will provide sanctuary staff and volunteers with additional tools for communication with sanctuary visitors regarding potential impacts to marine mammals from Navy operations near the Channel Islands.



Shauna Bingham, along with other participants of the U.S. Navy's "Leaders to Sea" program, prepares to board a helicopter to transit offshore to the *USS PREBLE*. Photo courtesy U.S. Navy.

Aquarium of the Pacific's Earth Day Celebration

From April 12-13, NOAA Fisheries and sanctuary staff participated in the Aquarium of the Pacific's Earth Day

Celebration in Long Beach, California. CINC volunteers hosted interactive exhibits about sanctuary resources, along with children's activities. With over 6,000 members of the public in attendance throughout the weekend, the Aquarium's Earth Day celebration was a fun and exciting way to share knowledge on how to conserve resources and preserve the marine environment for future generations.

Oxnard Earth Day Festival

On April 12, for the fourth year in a row, CINMS reached over 3,000 people, many (>66%) of Hispanic background, during the Oxnard Earth Day festival. At the sanctuary booth MERITO staff and CINC volunteers provided bilingual sanctuary information (printed and spoken) to the public. They also provided watershed model demonstrations that attracted a large number of Hispanic families with children. The demonstrations explained runoff pollution and how we can all contribute to ocean protection by changing a few practices at home. See p. 11 for more information about this event.

Los Angeles Zoo Earth Day Expo 2008 and California Wildlife Festival

On April 19, the sanctuary and the park partnered with the Friends of the Island Fox to participate in the Los Angeles Zoo's Earth Day Expo. The event highlighted California wildlife and focused on the endangered island fox. CINC volunteers also educated the public about other endangered species that occur in the sanctuary and park, such as seabirds and whales. Over 1,000 zoo visitors were estimated to attend the event.

South Coast Earth Day Festival, Santa Barbara

On April 20, the Community Environmental Council held the South Coast Earth Day Festival at the Santa Barbara County Courthouse Sunken Gardens. The theme for 2008, "Reduce Your Eco-Footprint," emphasized personal ways to reduce one's impacts on the planet, along with displays of renewable energy technologies, conservation techniques, and advanced-fueled vehicles. CINC volunteers represented the sanctuary and park at the event. This was one of the largest Earth Day festivals on record in Santa Barbara, with over 200 exhibitors and an estimated 10,500 festival participants.

Ventura County Science Fair and Interactive Science Math Career Expo

On April 23, Oxnard College sponsored the Ventura

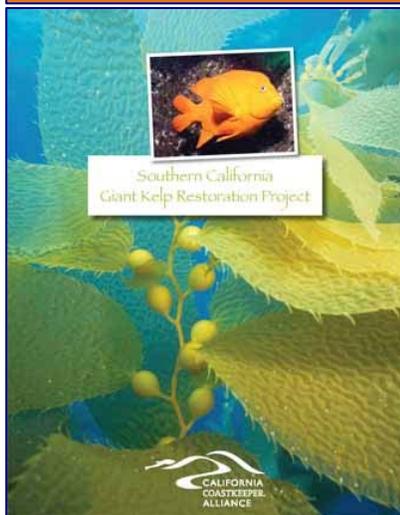
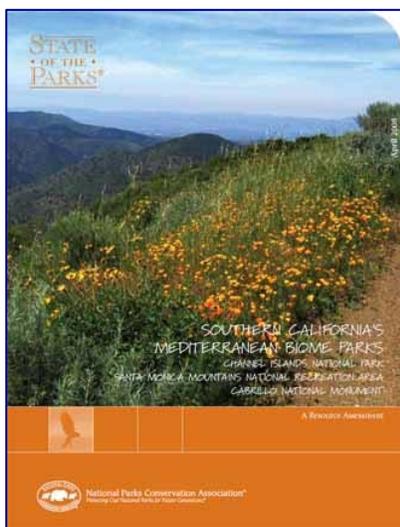
County Science Fair and Career Expo. The fair, which was first held in 1955, brings together students, teachers, and scientists from around the county to develop students' awareness of the importance of science in their lives, and to cultivate their interest in science. This year, approximately 1,000 sixth through twelfth grade students attended the fair. As part of the student's "Information Treasure Hunt," sanctuary and park staff, and CINC volunteers developed hands-on activities related to marine ecosystem monitoring, island fox population studies, and bathymetry in the Channel.

Santa Barbara School District Science Fairs

CINC volunteers provided hands-on activities and hosted sanctuary and park exhibits at the Hope School Science Night on March 13, Brandon School Science Night on March 20, and the Washington School Science Night on April 24. The main sanctuary and park activity focused on whale tail photo-identification to teach students about the unique patterns found on blue and humpback whales, and how those markings are used to study their populations.

MARITIME HERITAGE PROGRAM

In April, the National Parks Conservation Association published *Southern California's Mediterranean Biome Parks* in their *State Of The Parks* report (available at http://www.npca.org/stateoftheparks/mediterranean_biome/). The report provides a detailed assessment of the condition of natural and cultural resources for Channel Islands National Park.



Robert Schwemmer (Sanctuary Maritime Heritage Coordinator) provided 17 photographs that included aerial imagery, island interiors, and underwater imagery. Schwemmer also provided underwater imagery including the cover photograph for California Coastkeeper Alliance's report *Southern California Giant Kelp Restoration Project*. For more information on this project please visit: <http://www.cacoastkeeper.org/>.

On March 8, Schwemmer lectured the Los Angeles Maritime Museum Research Society and Coastal Maritime Archaeology Resources organization on the process involved in solving the identity of the Oregon mystery shipwreck *George L. Olson*. The lecture was held at the Los Angeles Maritime Museum in San Pedro, California.

West Coast Region Maritime Heritage Program

Shipwreck Torrent

Schwemmer is conducting historical research on the Alaskan shipwreck *Torrent* for a joint project between the Alaska Department of Natural Resources and the Office of National Marine Sanctuaries' Maritime Heritage Program. At the time of the *Torrent's*



Shipwreck *Torrent* in Alaska 1868. Frank Leslie's Illustrated Newspaper 09-19-1868.

stranding in 1868, the bark was operating as a charter vessel for the U.S. Army. It was carrying more than 125 soldiers and their families, with orders to sail to Port Graham and construct a military garrison on the shores of Cook Inlet, one of the earliest American outposts in Alaska.

Shipwreck George L. Olson

In February, Schwemmer traveled to Coos Bay, Oregon and met with representatives of the U.S. Bureau of Land Management (BLM), Oregon Parks and Recreation Department, and Coos Historical and Maritime Museum to assist in site documentation and research for the shipwreck *George L. Olson*. Recent winter storms producing coastal sand erosion exposed the historic

remains of this steam schooner and other shipwrecks along the Oregon coast. During his visit Schwemmer provided an overview of maritime heritage activities being conducted in national marine sanctuaries, since prior to Olympic Coast National Marine Sanctuary's collaboration for this project, both agencies were unaware of the Office of National Marine Sanctuaries'



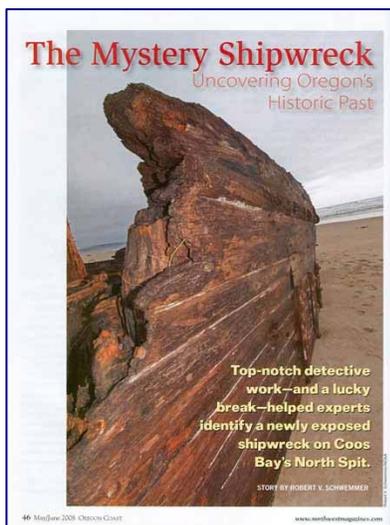
Shipwreck detectives (left to right) Calum Stevenson, Robert Schwemmer, Annie Donnelly and Steve Samuels. Photo: Vicki Wiese.

Maritime Heritage Program. For more information on the *George L. Olson* please visit this BLM new release page:

<http://www.blm.gov/or/districts/coosbay/newsroom/index.php>.

The trip to Oregon also included a tour of the Cape Blanco Lighthouse co-managed by state and federal partners, and meetings with local historians.

Schwemmer wrote an article for the May/June Oregon



Coast magazine entitled, "The Mystery Shipwreck- Uncovering Oregon's Historic Past," which focuses on the collaborative efforts between agencies and the local community to identify the mystery shipwreck as the *George L. Olson*.

Submerged Maritime Heritage Resource Inventory
Schwemmer is developing a submerged maritime heritage resource inventory for the region between Cape Mendocino and the Oregon border. This effort is in support of a possible expansion of the Cordell Bank and Gulf of the Farallones national marine sanctuaries called for in U.S. House of Representatives Bill 1187. For more information on this bill visit:

<http://www.thomas.gov/cgi-bin/bdquery/z?d110:h.r.01187>.

West Coast Region Leadership Team Meeting
During March, Schwemmer traveled to Big Sur to attend the Office of National Marine Sanctuaries' West Coast Region Leadership Team meeting, where he gave a briefing on west coast maritime heritage projects for 2007 and 2008. During the meeting Schwemmer received feedback from west coast national marine sanctuary superintendents on maritime heritage projects



Insert photo: West Coast Leadership Team meeting at Big Sur. Photo: Robert V. Schwemmer planned for 2009, and answered questions about past projects.

WEB SITE (<http://channelislands.noaa.gov>)

Recent Updates

Visit the web pages listed below to see recently updated sections of the CINMS web site.

Updates to the marine reserves section host additions of: a new map with coordinates, the Final Rule and Final Environmental Impact Statement documents, and updates to the marine reserves science page at:

<http://channelislands.noaa.gov/marineres/main.html>

<http://channelislands.noaa.gov/marineres/supplemental.html>

<http://channelislands.noaa.gov/marineres/mrs.html>

Updates to the advisory council section of the website include new working groups and subcommittees and their meeting agendas at:

<http://channelislands.noaa.gov/sac/wgsub.html>

Amy Cale (Sanctuary Web Developer) has also updated the blue whale ship strike page. This page is offered on the sanctuary's home page news 'ticker,' drop down menu, and also at:

<http://channelislands.noaa.gov/focus/alert.html>

Cale has also updated the management plan review pages that now host the Supplemental Draft Environmental Impact Statement and Proposed Rule on large vessel sewage and graywater discharges online at:

<http://channelislands.noaa.gov/manplan/overview.html>

Don't forget to check out our calendar of events and 'what's new' pages to find out what's happening locally:

<http://channelislands.noaa.gov/focus/calendar.html>

<http://channelislands.noaa.gov/focus/wnew.html>

Upcoming Modifications

Discussions are in progress to upgrade the shipwreck database to a West Coast Region database. We are still in the development phase of a backend interface to the Marine Mammal Sightings Database.

The Plumes & Bloom's website is on deck for file replacement and updates.

Please take a few moments to peruse the site. Your feedback is greatly appreciated. Comments and suggestions can be sent to amy.cale@noaa.gov.

CHANNEL ISLANDS: STORIES FROM THE PAST

Seventy Years Ago on April 30, 1938 the *Los Angeles Times* reported:

“Islands Made Monuments – President Sets Aside Geological Areas”

Portions of the Channel Islands off the Southern California coast were named as national monuments yesterday by President Roosevelt because of their geological and scientific interest. Included were 538 acres of Anacapa Island, a group of three islets, and 581 acres on Santa Barbara Island. Certain lands on both islands also were reserved for use by the Bureau of Lighthouses.

The Presidential order described the islands as containing “fossils of Pleistocene elephants, ancient trees and noteworthy examples of ancient volcanism [sic.], deposition and active sea erosion in addition to other objects of geological and scientific interest.



East Anacapa Island. Photo: Robert V. Schwemmer

SPOTLIGHT ON VOLUNTEERS

Channel Islands Naturalist Corps Volunteer Outreach Report: March 10, 2008

As some of you may know, and many may not, the Aquarium of the Pacific in Long Beach is a first rate, professionally run aquarium, with heart. On March 8, naturalist Dino Dal Bon and I arrived at the aquarium to assist CINP Ranger Bill Faulkner in setting up and staffing the Sanctuary and Park display for the aquarium's Technology Day. Peter Martineau, our main contact with the aquarium staff, was most accommodating for any needs we felt were important for the booth. We set up one table for Sanctuary and Park information, and the other for "kids" crafts (which turned out to attract all ages). It would be a tough call to say which table was the best draw, as they seem quite complementary, each feeding off the other.

Our blue and gray whale baleen and jar of krill were real hits, drawing many questions. We had many good discussion sessions with folks about the Sanctuary and Park, some not knowing they are even here. They now do, with many very enthused and thinking about coming on out to see us. We were caught a bit off guard with early questions about the sighting of a white orca in the Aleutian Island Chain off Alaska. We were unaware of this sighting, so Ranger Faulkner made a quick call to find out about it, and we were now ready for the rest of the day on that topic.

At our craft table kids could color a whale, make a bead bracelet out of little sea creature beads, or create a nice, sea otter paper bag puppet. It became quite clear that the two chairs at the craft table were not enough, so we asked for two more, but even that was not enough. Soon parents were sitting down with their kids doing crafts, then the teenagers thought it cool to stop and do a bracelet or necklace, then even the adults were making something for themselves. The kid in all of us was out and fully fledged. If you can, imagine approximately 20 to 25 folks of all ages, many strangers to one another, gathered around the table very cooperatively sharing and passing around the beads, glue, paper, little kid's scissors, etc., and assisting one another in this purely larky thing of doing sea crafts for their kids and/or themselves. Beautiful!!

It was just a delight to chat with all the folks who came by our tables. We had a full house most of the day. We made sure folks showing some real interest went away with the full set of three pieces of literature on the Sanctuary and Park for their full information kit.

Following our shift, Dino and I, never having been there before, took in the Aquarium. Two of the main tanks had divers in them explaining through a microphone what was going on in each tank. They were also answering questions fielded by another aquarium staffer outside the tank with a microphone to communicate with the diver. The rest of the tanks were self-guided. Interestingly, the displays are divided up for different areas of the Earth's ocean regions. So, one gets the feel of moving around the planet as you go from sector to sector.

In addition to our Sanctuary and Park display, Technology Day included displays for NOAA and their research ships. The Jet Propulsion Labs ocean studies satellite group was there showing the information they are gathering, which was very interesting, and Long Beach City College had information about a class in which the students compete to develop new kinds of ocean remotely operated vehicles (ROVs) and that was very interesting as well.

To me, the most unique sea animal on display was the leafy (sea) dragon. Check it out. Incredible!!

In all it was a very good day, recommended for all.

- Kenneth A. Tatro
Channel Islands Naturalist Corps `2007

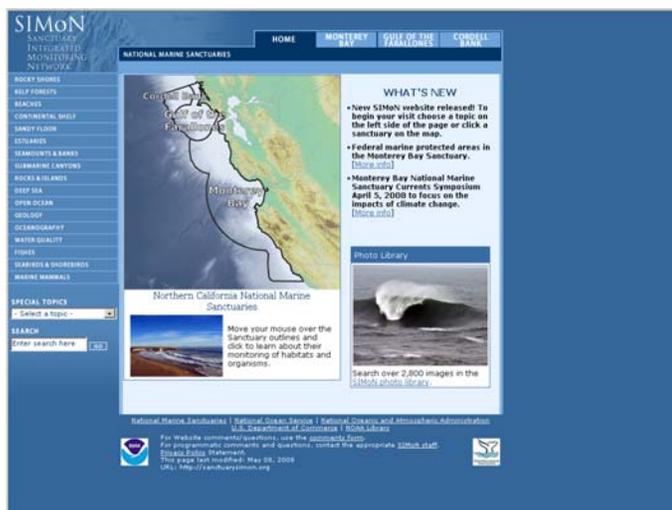


NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS



California National Marine Sanctuaries and Partners Launch New Web Site

NOAA and partners in the regional science and management community launched SanctuarySimon.org, a comprehensive, user-friendly online resource featuring the latest scientific research conducted within the Gulf of the Farallones, Cordell Bank, and Monterey Bay national marine sanctuaries. Sections of the site provide information on physical characteristics of the area, including geology, oceanography, and water quality. The site integrates scientific research and long-term monitoring data to provide information for effective management and better understanding of sanctuary resources. Sanctuariesimon.org will be continuously updated and enriched as additional partners in science and education join the project. Researchers from all over the world can contribute information. In the future, if funding is available, the Office of National Marine Sanctuaries would like to expand SIMoN across the west coast.



Sanctuariesimon.org is a new web site that provides a wealth of information about, and photographs from the three national marine sanctuaries in central California.

NOAA National Marine Sanctuaries Featured on an Animal Planet Special with Jeff Corwin

A recent Animal Planet special featured Claire Fackler (Office of National Marine Sanctuaries Education Liaison) discussing with host Jeff Corwin ocean facts and the importance of NOAA, especially national marine sanctuaries. The special aired April 2 and 5, and is archived on <http://animalplanet.com>. Office of National Marine Sanctuary staff were on hand for the Animal Planet filming on O'ahu, Hawai'i, which was held in conjunction with the press events for Fox-Walden's movie, *Nim's Island*, starring Jodie Foster, Abigail Breslin and Gerard Butler. The Office of National Marine Sanctuaries and the National Wildlife Federation are conservation partners of Walden Media for *Nim's Island*, a movie about a young girl living on a remote tropical island with her marine scientist father, which prominently features the ocean and marine life. Through this partnership, national marine sanctuaries have been featured in a 16-page educator's guide distributed to over 500,000 elementary school teachers, two mass-produced bookmarks going to various national distribution networks, including Borders, and online materials featured on <http://nimsisland.com>, <http://animalplanet.com/nimsisland>, and <http://sanctuaries.noaa.gov/education>.

National Science Teachers Association Conference

Office of National Marine Sanctuaries staff participated in the National Science Teachers Association conference in Boston, Massachusetts from March 26-20. Nearly 12,000 science teachers attended the conference and visited the action-packed exhibit hall. NOAA hosted a large exhibit booth passing out materials to bring the ocean and atmosphere to classrooms across the country. The National Marine Sanctuary System hosted nine presentations and short courses, and conducted evaluation at each session and at the exhibit booth.

Marine Forensics Support Federal Enforcement

Scientists from NOAA National Centers for Coastal Ocean Science recently analyzed over 100 pieces of evidence in a case involving multiple violations of the Magnuson-Stevens Fishery Conservation and Management Act by a Florida fisherman. DNA analysis identified fillets as red snapper, mutton snapper, and cobia. These findings were used by NOAA Fisheries Law Enforcement to cite violations resulting in civil penalties of \$16,000 and a 45-day permit sanction for the owner and the operator of the vessel. Forensic support can be critical in deciding whether or not certain civil or criminal penalties against suspected poachers are justified and can serve as a future deterrent to the illegal use of marine resources.

NOAA assists with Training Program in Vietnam: Planning for Sustainable Fisheries in MPAs

For two weeks in April, Sean Hastings (Sanctuary Research Coordinator) was in Binh Dinh Province, Vietnam as an instructor for an eight-day "Planning for Sustainable Fisheries in MPAs" training program. The program is sponsored through a partnership between The World Conservation Union (IUCN) of Vietnam and NOAA. This area was chosen as a living case study for the training due to its proximity to Con Chim Mangrove Reserve and local fishing communities. The program was specifically tailored to the needs of the South China Sea region.

Ocean Sciences Curriculum Sequence for Grades 3-5

Claire Fackler participated in the advisory board meeting for the NOAA Environmental Literacy Grant funded project titled "Ocean Sciences Curriculum Sequence for Grades 3-5" in Berkeley, California on February 13-14. The project is led by the University of California, Berkeley's Lawrence Hall of Science, in partnership with Rutgers University, the State University of New Jersey's Institute of Marine & Coastal Studies, Center for Ocean Sciences Education Excellence—Mid-Atlantic, and the Carolina Biological Supply Company. The project aims to create an ocean sciences sequence for third through fifth grades that will become the most widely used elementary ocean science curriculum nationwide. The Office of National Marine Sanctuaries is helping guide the process to map the conceptual framework of the instructional materials, as well as assisting with the large-scale implementation to broaden impact and bring the ocean into classrooms across the

country.

Drop Your Sails When Viewing Whales

Stellwagen Bank National Marine Sanctuary is working with the Whale and Dolphin Conservation Society and NOAA Fisheries to disseminate information about "[See a Spout](#)," a boater-education course focused on safe boating around whales. The mini-course is popular with boating organizations such as Power Squadrons and U.S. Coast Guard Auxiliaries. A revised See a Spout brochure will convey six tips for boaters, including a new item that instructs boats to "drop sails when viewing whales" (boats under sail have less control and are more likely to strike a suddenly surfacing animal). Using these tips for safe boating around whales will keep boat operators in compliance with the Endangered Species Act and Marine Mammal Protection Act as well as regional whale watching guidelines.

Hundreds Celebrate Reopening of the Gulf of the Farallones National Marine Sanctuary Visitor Center

On March 22, 575 people crowded into a newly renovated Visitor Center and NOAA Tide Station at the Gulf of the Farallones National Marine Sanctuary. Amid exhibits refurbished to simulate a dockside environment, visitors listened to the sounds of feeding humpback whales, and watched images of swirling krill swarms and live bell jellies tumbling among aquarium currents. The historic Golden Gate Tide Station was opened to the public for the first time, and staff explained the mechanisms that measure tides and currents to prevent vessel collisions and groundings. The station also records data on earthquakes and tsunamis, and proof of changing sea levels.

Inspiring Coastal Stewardship in Washington State

The Olympic Coast National Marine Sanctuary and the NOAA Marine Debris Program presented a talk called *Plastics in the Ocean* at the REI store in Seattle, Washington, to encourage participation in the Washington Coastal Cleanup Day on April 26. Speakers addressed the sources, impacts, and movements of marine debris in the northern Pacific. The presentation introduced local, regional, and national efforts to clean up our oceans and beaches. Last year, over 800 volunteers removed 23 tons of marine debris on beaches from Westport to Neah Bay, Washington, improving conditions for marine wildlife and habitats within the Olympic Coast National Marine Sanctuary.

THREE-MONTH CHANNEL ISLANDS NATIONAL MARINE SANCTUARY CALENDAR

MAY	
May 10	<i>3rd Annual Safe Boating Expo</i> Channel Islands Harbor For more information: http://www.channelislandsharbor.org/events.cfm
May 13, 14	<i>From Shore to Sea Lecture Series:</i> Dan Richards, Channel Islands National Park <i>Black Abalone on the Channel Islands Teeter Towards Extinction</i> Tuesday: 7:00 pm Santa Barbara Maritime Museum (113 Harbor Way in Santa Barbara) Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)
May 17	<i>Children's Festival</i> Alameda Park, Santa Barbara For more information: http://www.fsacares.org/spotlight.htm
May 22	<i>Children's Water Science Exploratorium</i> Oxnard Performing Arts & Convention Center For more information: http://publicworks.cityofoxnard.org/Department.aspx?DepartmentID=14&DivisionID=99&ResourceID=492
May 28, 29	<i>Channel Islands Live!</i> Channel Islands National Park Visitor Center For more information: http://chil.vcoe.org/index.htm
May 30	<i>Sanctuary Advisory Council Meeting</i> Casa Las Palmas (323 E. Cabrillo Blvd. in Santa Barbara) An agenda, directions and more information will be posted at: channelislands.noaa.gov/sac/announcement.html
May 30-31	<i>BioBlitz Santa Monica Mountains National Recreation Area</i> http://www.nationalgeographic.com/field/projects/bioblitz-ca-2008.html
JUNE	
Jun 1	<i>Wonders of Water, Santa Barbara Zoo</i> For more information: http://www.santabarbarazoo.org/events.asp
Jun 4, 5, 12	<i>Channel Islands Live!</i> Channel Islands National Park Visitor Center For more information: http://chil.vcoe.org/index.htm
Jun 10, 11	<i>From Shore to Sea Lecture Series:</i> Brian Latta, University of California Santa Cruz, Predatory Bird Research Group <i>Peregrine Falcons</i> Tuesday: 7:00 pm Santa Barbara Maritime Museum (113 Harbor Way in Santa Barbara) Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)
JULY	
Jul 8, 9	<i>From Shore to Sea Lecture Series:</i> Jan Timbrook, Santa Barbara Museum of Natural History <i>Chumash Ethnohistory</i> Tuesday: 7:00 pm Santa Barbara Maritime Museum (113 Harbor Way in Santa Barbara) Wednesday: 7:00 pm Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura)
Jul 10-13	<i>13th Annual In-Water Ventura County Boat Show, Channel Islands Harbor</i> For more information: http://www.ci-boatshow.com/
Jul 18	<i>Sanctuary Advisory Council Meeting</i> Channel Islands National Park Visitor Center (1901 Spinnaker Drive in Ventura) An agenda, directions and more information will be posted at: channelislands.noaa.gov/sac/announcement.html
Jul 30 – Aug 10	<i>Ventura County Fair, Ventura County Fairgrounds</i> For more information: http://www.venturacountyfair.org/

CINMS Staff

Santa Barbara Harbor Office

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Todd Jacobs - Deputy Superintendent

Michael Murray - Deputy Superintendent, Advisory Council &
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Amy Cale - Web Developer

LTJG Matt Davis - Operations Officer

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Laura Francis - Education Coordinator

Sean Hastings - Resource Protection Coordinator

Steve Katz - Research Coordinator

Charles Lara - Vessel Operator

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Natalie Senyk - Scientific Advisor

Terrence Shinn - Vessel Captain

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Lauren Hess - Policy, Planning, and Resource Protection

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Matt Brookhart - Policy Coordinator

Nicole Capps - Management Support Specialist

Dave Lott - Operations Coordinator

Local NMSP Staff

Claire Fackler - West Coast Education Liaison

Sarah Marquis - West Coast Media Coordinator

Channel Islands Marine Sanctuary Foundation

Kelly Darnell - Acting Executive Director

Learn More About Your Sanctuary

The Channel Islands National Marine Sanctuary produces the Sanctuary Superintendent's Report in conjunction with bi-monthly Sanctuary Advisory Council meetings. To learn more about the sanctuary please visit our web site at: <http://channelislands.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:

<http://channelislands.noaa.gov/sac/main.html>.

The National Marine Sanctuary Program

The National Marine Sanctuary System consists of 14 marine protected areas that encompass more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Northwestern Hawaiian Islands Marine National Monument." The NMSP, which manages the system, was established under the National Marine Sanctuaries Act of 1972. Visit the NMSP web site at: <http://sanctuaries.noaa.gov/>.

Channel Islands National Park

To learn about Channel Islands National Park visit their web site at: <http://www.nps.gov/chis/homepage.htm>.

GET INVOLVED AND STAY INFORMED!

To learn how to get involved in the sanctuary visit:
<http://channelislands.noaa.gov/focus/involved.html>

Sign up for the CINMS listserv to receive email notices about upcoming sanctuary events, and public meetings of the Sanctuary Advisory Council and its working groups:
<http://channelislands.noaa.gov/focus/list.html>

- CONTACT INFORMATION -

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